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PROJECT 99

The Evaluation of a Modified Junior High School Program for Over-age, Underachieving Students

Prepared by D. Hepburn Consulting, Ponoka
for the County of Ponoka No. 3
under contract to Alberta Education,
Edmonton, Alberta

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ABSTRACT

Every junior high school faces the challenge of over-age, underachieving students. The challenge can be even greater than usual in schools enrolling significant numbers of Native students, some of whom may, for a variety of reasons, experience great difficulty in coping with the regular academic program in the grades that are appropriate for their chronological ages. The present study evaluates a program at Ponoka Junior High School designed for such students, based on computer-assisted, small-group and individualized instruction. The program, known as Project 99, placed selected students into an alternative grade 9 program for one year, regardless of their prior grade placement, before advancing them to high school. Students were integrated into regular grade 9 classes for instruction in optional subjects and physical education. Instruction in the core subjects was given in a special-class setting, taught by one teacher. Extensive use was made of microcomputers.

Twenty-five students, all but one of whom were Native students, were assigned to Project 99 during the 1985-'86 and 1986-'87 school years. Sixteen of these students completed their Project year. Thirteen of these went on to high school the following year, and another continued in school but in an alternate, off-campus junior high school program. At the time of the evaluation, nine students were still in school. The interview data from these nine students provided the main body of material for the evaluation. In addition some reference is made to teacher observations and to school records concerning attendance and achievement.

Attendance of students in Project 99 was generally superior to the average for Native students in the school and compared favourably with the rate for non-native students. Moreover, the Project students tended to maintain good attendance rates in high school. Achievement gains, both in the Project year and subsequently, are discussed in the study. Although achievement in high school subjects varied considerably among the students, all of them earned credits in at least some of their courses, sometimes with quite presentable marks, especially (but not only) in technical subjects. It is noteworthy that four of the students earned an average of 27 credits per year.

It is clear from the students' comments that the use of microcomputers, although a positive factor, was not the most important factor in changing the students' attitudes toward school. Four other factors were cited with greater frequency: the teacher, the learning atmosphere in the classroom, being taught in a class with others the same age, and being taught material that permits the students to experience success. In view of the importance placed by the students on these factors, questions are raised concerning several common school practices. It is felt that the study provides useful insights into the factors which one group of significantly over-age, underachieving Native students have identified as being important in changing their school experience in a very positive direction.

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BACKGROUND TO THE STUDY

Every junior high school faces the challenge of over-age, underachieving students. For schools in Alberta enrolling significant numbers of Native students, this challenge can be even greater than usual. For a number of reasons related to language and cultural differences and, frequently, to irregular school attendance over a period of years, a significant number of Native students experience great difficulty in coping with the regular school program. By the time they reach junior high school, their many failure experiences have seriously reduced their motivation to meet the expectations of the school. A self-defeating cycle develops of failure, poor attendance, and diminished motivation, all too frequently leading to early withdrawal from school.

Ponoka Junior High School enrols many Native young people (typically about twenty per cent of the school's enrolment), most of whom come by bus from the Four Bands Reserve nearby. While the majority of these students cope well with the regular school program, there are some who do not. They are over-age for their nominal grade, and are generally far behind in basic skills and knowledge. In an attempt to assist these over-age, underachieving students to overcome their deficiencies, the school developed an experimental program at the grade 9 level, based on computer-assisted, small-group and individualized instruction, which came to be known as Project 99.

Twenty-five students, all but one of whom were Native students, were assigned to Project 99 during the 1985-'86 and 1986-'87 school years. Many of them completed their year in the Project, and some of them subsequently went on to high school. The purpose of the present study is to assess the value of the Project.

In this report, Project 99 is described, Project outcomes are described, and then student views are summarized and discussed. In the concluding section, an attempt is made to identify some salient points that can be gathered from the study.

EVALUATION DESIGN

In order to assess the effectiveness of Project 99, opinions were solicited from the Project teacher and from students who had participated in the Project. In addition, some hard data were collected, specifically school attendance information and school achievement data. The study is based primarily on interviews with students who participated in Project 99 in 1985-'86 and 1986-'87. To the extent that these students can be seen as representative of over-age, underachieving students attending junior high school, the results can be generalized to such students in other parts of the Province.

There are, however, some obvious limitations. Almost all of the participating students were Native students living on a Reserve and attending school in a neighbouring town. It is difficult to say to what extent the results can be applied to non-Native students, or to Native students attending school on the Reserve.

Also, the study is based almost entirely on the results achieved and the opinions expressed by nine students who completed Project 99 and went on to enrol (and stay) in high school. Although it would have been desirable to interview other students who had been in the Project but were no longer in school, this was not possible. There were seven other students who finished the Project but did not go on to high school, or else dropped out without completing a semester. There were also nine other students who were selected for the Project but did not stay to complete the Project year. Unfortunately these other students were either unwilling to be interviewed or, more frequently, were simply unavailable.

There is a need for information about the ways in which these other students differed from the nine who were interviewed. It would be helpful to know whether or not the Project was beneficial to those who completed the year but subsequently dropped out of school. It would also be helpful to know what factors differentiated those who completed the Project year from those who did not. Perhaps the latter students had experienced a greater degree of failure prior to their selection for Project 99, or had less supportive parents, or had other problems in addition to their school problems that made it difficult for them to remain in school. The lack of such information limits the degree to which the findings of the present study can be generalized to other Native students.

In spite of these limitations, the study does provide some useful insights into the factors which one group of significantly over-age, underachieving Native students identified as being important in changing their school experience in a very positive direction. These insights may be helpful in planning interventions for similar students elsewhere.

DESCRIPTION OF PROJECT 99

The Students

Students selected for Project 99 were all students in grades seven or eight at Ponoka Junior High School who were over-age for their grade. All had repeated at least one grade in elementary school, and all had failed their most recent junior high school grade. That is, had they not been assigned to Project 99, they would have repeated their previous grade. Twenty-five students (16 boys and 9 girls) were assigned to the Project in 1985-'86 and 1986-'87. The 21 that came from grade seven had a mean age of 14 years and 5 months. That is, they were approximately two years older than most students entering grade seven. Similarly, the five students from grade eight had a mean age of 15 years and 3 months, and were therefore approximately two years older than most students beginning grade eight.

The students were all considered to be of average intellectual ability. Scores on group intelligence tests administered in the elementary grades and, in some instances, on individually administered tests, indicated that these were students with intellectual ability in the average range. None had been identified as educably mentally handicapped. Yet they were significantly delayed in their grade placement. Moreover, they were below grade level and age expectations on standardized measures of reading and arithmetic. On the Canadian Tests of Basic Skills administered at the beginning of the 1985-'86 year, mean grade scores on the Reading Vocabulary, Reading Comprehension, Mathematics Concepts and Mathematics Applications subtests ranged from 5.2 to 6.6. (Considering the students' chronological ages, these scores represent academic retardation of at least two grade levels.) The exception was Mathematics Computation, where the mean grade score was slightly better, at 7.3. Similarly, on the Canadian Achievement Tests administered at the beginning of the 1986-'87 year, all of the mean scores were in the lowest quartile. Scores on the Schonell Spelling Test and the Stanford Diagnostic Arithmetic Test were similarly in the mid-grade-six range.

The majority of the students had been poor attenders in the years prior to their selection for Project 99. At least four of them had been the focus of a good deal of administrative attention because of poor attendance, and one had been suspended for truancy.

The Program

Project 99 was designed as a one-year program, following which the students would be expected to go on to high school, either in a regular program or as special students. The participants spent half of each six-period day in the Project with one teacher, and the rest of the day integrated into regular grade nine classes for physical education and options. The Project teacher was responsible for instruction in the core component of the students' program. The major focus was on upgrading in language arts and mathematics. Topics in science and social studies were used in language arts instruction, but no attempt was made to cover the Provincial curriculum in these subjects. An individual program plan was prepared for each student, and an attempt was made to focus instruction on each student's areas of need.

Computer Based Instruction

In the Project portion, extensive use was made of computers. The class had access to the school's computer laboratory for two periods of every day. They spent at least one full period working at the computers, and sometimes two. Four types of computer activities were undertaken. First, the students learned to program in the Logo language, following a course of lessons designed by Carnew and Clark (1985) to develop students' cognitive skills. Secondly, they used tutorial and drill and practice programs to address deficiencies in basic skills (e.g. Milliken Math). Thirdly, they learned to use a word processing program to assist them in improving their composition (Bank Street Writer and Appleworks were both used.) Finally, they used a variety of game and simulation programs to challenge their problem-solving abilities.

Thus Project 99 offered the selected students a program that differed from what they would otherwise have encountered in at least five ways:

(a) The pupil-teacher ratio for half of each day (the core component) was very favourable, being 13 to 1 or 12 to 1 at the beginning of the year and even lower as the year progressed.

(b) The students had only one teacher for instruction in the core subjects.

(c) Instruction in basic skills in language arts and mathematics was designed to address each student's identified areas of need. This generally meant that instruction had to be initiated at a level that was far below the students' nominal grade level in order to ensure initial success and then progress gradually to increasingly difficult work.

(d) The students had frequent access to microcomputers, and extensive use of computers was a planned part of the program.

(e) The students were placed with others students their own age, both in the Project class and in the grade nine classes into which they were integrated for their options.

PROGRAM OUTCOMES

Student Attitudes

In the view of the Project teacher and the school principal, many of the students were initially upset that they were being placed into a "special class", but this changed as they began to form a cohesive social unit. They identified with Project 99 as their class, and with the Project room as their home room, the place where they could keep their belongings, hang their posters, etc. Almost a "family" feeling developed in the Project, with students helping and being supportive of each other, and often policing each other within the classsroom. For students who had seldom felt accepted in other grades as part of the regular class, the Project provided a valuable social group. Those who had been socially more successful before continued to socialize with students in the regular classes. The overall attitude toward school appeared to improve greatly. With few exceptions, the students entered the Project hating school. By the end of their year this had changed dramatically. In the view of the Project teacher and the school administration, based on their observations of attendance, cooperation, willingness to work and other outward indications of attitude as well as on the students' own comments, all those who remained in the Project found school tolerable at least, and some actually liked it.

Student Behaviour

It is difficult to generalize about student behaviour in the Project. After the initial concern about being in a "special class" had been overcome, there followed a period when some students became "cocky" and acted as if they were special and above the rules and restrictions of the school. In the first year, especially, it took a number of weeks for the students to arrive at an acceptable way of behaving within the Project class and within the school at large. Following that, the Project teacher reported that behaviour within the

Project became quite acceptable. The students were cooperative, purposeful in their behaviour and well-mannered toward each other and toward staff. It was not uncommon for students to hold the door open for the teacher, volunteer assistance, etc. Some students, however, remained somewhat uncooperative in the regular classes they attended. The teacher's attempts to find the right degree of structure led to some interesting observations. Early attempts at a relaxed atmosphere with little structure were quite unsuccessful. Students appeared to be happier and to respond better when there was quite a bit of structure. It seemed to help when rules and expectations were clear. Moreover, all of the students wanted to be graded on their work. Feedback and advice from the teacher was essential. Without it, work simply did not get done.

Attendance and Retention

Not all of the 25 students assigned to Project 99 continued to the end of the school year. In fact, only 9 of the 12 students in the first year (4 girls and 5 boys) finished the year, and 7 of the 13 students in the second year (1 girl and 6 boys). Of the 16 who completed the Project year, 13 went on to high school the following year, and another one continued in school, but in an alternate, off-campus program. Attendance in the Project year was generally good, although a little below the average for the school. The attendance rates of individual students in the first year ranged from 79.6 % to 97.0 %, with a mean rate of attendance of 87.4 %. In the second year, the range was from 87.3 % to 100 %, with a mean of 92.5 %. These figures compare favourably with the school's typical average attendance rate of 94 %, and are considerably better than the average attendance rate for Native children in the school, which is typically about 83 %.

Achievement

The students' major achievements in their Project year were not easy to quantify. In their teacher's judgement, their greatest gain was in learning how to work: how to assess the requirements of a task, how to break it into parts, how to organize a task for efficient execution, and how to persist with a task until its completion. Another major accomplishment was learning how to deal with failure. When they entered the program, the students typically viewed errors catastrophically and resented correction or criticism. In the course of their Project year, they became less fearful of ridicule and came to accept errors as a source of information from which they could learn.

In mathematics the students' greatest achievement, in the judgment of the Project teacher, was in learning how to make use of what they already knew. Although there were certainly gaps in the students' knowledge of basic skIls, they did all have an understanding of basic computation. However, they often did not know how to apply what they knew to particular problem situations. Moreover they lacked problem-solving strategies. In the course of the Project year they learned to make use of their prior knowledge.

In language arts the greatest achievement, again in the judgment of the Project teacher, was the development of enjoyment of reading. Although the students generally had reasonably well-developed basic word-reading skills when they entered the Project, they generally disliked reading and avoided it. During the Project year, much time was devoted to reading stories and novels that were of interest to the students, rather than practice materials especially designed to develop particular comprehension skills. A great deal of attention was devoted, as well, to developing the conceptual background and vocabulary necessary for the understanding and enjoyment of the stories. One result was a marked increase in the students' willingness to read and their enjoyment of reading.

In their optional subjects, for which the students were integrated into regular grade nine classes, the students' record of achievement varied considerably. Some teachers found it very difficult to modify their course requirements to accommodate the Project 99 students' learning difficulties or lack of background. In these courses, the Project students tended not to do well. In other courses, such as art, they did well.

When they enrolled in high school, five of the students were assigned to special, preparatory courses in English and mathematics, but otherwise the students were enrolled in regular high school courses. Of the nine students who were interviewed for the present study, eight were attending high school. All of them had earned credits in at least some of their courses, sometimes with quite presentable marks, especially (but not only) in technical subjects.

It can perhaps be argued that, since only 16 out of 25 students stayed until the end of their Project year, and only 14 of these continued in school the following year, the Project achieved rather modest success. However, when one considers that none of these students had the benefit of a complete grade 9 preparation for high school, and all of them had a history of school failure and discouragement, the fact that over half of them went on to high school at all is perhaps evidence of success. The degree of success in high school courses varied considerably. Some of the students dropped a number of subjects before the end of the semester, and four of them earned 20 credits or less per year. The other four, however, earned an average of 27 credits per year.

A look at two of these students in more detail will give a better indication of the nature of their achievement. The first is a boy who was 15 years of age and about to repeat grade 8 when he was admitted to the Project. He had already repeated grade 7. He had found school boring and hard to understand. He has now completed four semesters in high school and has earned credits in English 13, Mathematics 15, Physical Education 10, Science 11, Social Studies 10, Building Construction 12, 22A and 22C, Driver Education 10, Mechanics 12, and Typing 10. His marks have generally been above 60 %, with an average of 62 %. His attendance rate at the high school has been been 91.9 %. Had he not been assigned to the Project, he would just now be completing grade 9 at best, at the age of 18 years.

The other student is a girl who was 15 when she entered the Project, about to repeat grade 7. She had already repeated grade 4. She didn't like school and didn't have many friends. Her attendance had been only fair. She has now completed two semesters in high school and has earned credits in English 13, Science 11, Social Studies 10, Art 10, Beauty Culture 12 and CALM 20. Her attendance rate has been 90.3 %. Had she not been in the Project, she would now be finishing grade 7 at age 17 or, perhaps, would have dropped out of school altogether.

STUDENT INTERVIEWS

Selection of Students

The students interviewed were those still in school in Ponoka at the time of the study. It was initially intended to interview as many as possible of the students who had been part of Project 99, including those who had dropped out of the Project and those who had completed it but had subsequently dropped out of high school. However, it was not possible to locate some of the students, and others were unwilling to be interviewed. Of the 16 students who had completed their Project year, nine were still in school in June of 1988 (8 boys and 1 girl). All of these were willing to be interviewed. Their responses provide the source material for this part of the study.

The Interview Instrument

An interview schedule was prepared, designed to elicit the students' views concerning (a) their school history prior to their year in Project 99, (b) their experience in the Project, (c) their experience since leaving the Project, and (d) their evaluation of the Project. The interviews were conducted by a Native counsellor-aide employed by the school system to work with Native students in the junior high school. She had demonstrated an excellent ability to work with students and establish rapport with them. She was given inservice instruction in the use of the structured interview schedule. The interviews took place at school during school time, during the month of June, 1988. The interviewer made written notes as the student talked and, in addition, each interview was tape-recorded so that a complete transcript of each interview could be made later. Although the students were willing to discuss all of the topics raised in the interview schedule, their comments were in some cases quite brief and it was not possible to draw them out further. The students' interview responses are summarized below.

Previous School History

All of the students had attended Ponoka Junior High School in the year prior to their year in Project 99. For eight of them it was the only junior high school they had attended. The other one had spent two years in Ermineskin Junior High School before coming to Ponoka Junior High. In the elementary grades, four of the students had attended only one school. Three had attended two different schools, and two others had attended three. For the most part the schools were all in Hobbema and Ponoka, but two students had attended schools elsewhere, including one who had attended a total of five schools in British Columbia and Alberta.

Only one of the students claimed to have had "average" attendance. Another said that his attendance had been "rotten". The rest claimed to have had "fair" or "fairly good" attendance, usually citing illness or some other legitimate excuse for their absences. One added the comment that, although his attendance was "not bad", he "wasn't really there mentally" most of the time. Students were asked if they had ever dropped out of school before. None had, but one student said that he had been suspended once.

Students were next asked about their marks in years prior to the Project 99 year. One claimed to have had marks that were "not bad", but this was not defined. Four others said that they were "below average". The remaining four were more specific, saying that their marks had been in the 30% to 50% range. One indicated that physical education had been his only mark over 50%, and another said that he had passed only in the options. Regarding failure and grade repetition, the students remembered repeating grades in elementary school as well as in junior high school. Grade 3 was the grade most commonly repeated.

When the students were asked to recall their feelings about school before their Project 99 year, only one said that he had liked school before. Two others said it was "okay", and another said that it had been "pretty good until junior high". The remaining five said that it had been dull, boring and distasteful. One said that it was "hard to understand most things". Another said that he wasn't learning anything and just sat at the back of the class and kept quiet. He described himself as "quiet and shy". One other student summed up his feelings about school by saying, "If there was nothing else to do, I would go to school."

The students were then asked how the Project 99 experience had changed their feelings about school. With only one exception, the students saw it as a year of change. The one exception said that "nothing really changed except the class". The others all saw it as a year when they got caught up on things they had missed in earlier grades, and got a better idea of what they were doing in school. The most common observation was that the work was easier and that school was fun. The student who had described himself as "quiet and shy" and as sitting silently at the back of the class, commented that in the smaller Project 99 class he found it easier to talk and to ask questions. "In the regular class, I felt lower than everybody. In 99 everyone was the same, and asked the same questions." Three students commented that they looked forward to school that year. Even the one who had described his previous attendance as "rotten" said that he hardly missed a day of school that year. The magnitude of the change is reflected in the comment of one student when he said, "It's the reason I'm still in school."

The matter of family support and attitudes was explored next. Nearly all of the students saw their parents as encouraging them to attend school. Only one said that his parents didn't say much about it. At the other extreme, one student said that his parents forced him to go, and another commented on the pressure he felt to stay in school. The others all said that they were encouraged, and sometimes pushed a little. One said that his parents encouraged him every day and explained the importance of school. Another said that they encouraged him, but the final decision was his. It is unfortunate that none of the students who dropped out of the Project was available for interviews. It would be interesting to know if parental encouragement, or lack of it, was a factor in their decision to leave the Project.

Students were also asked about whether or not they had faced significant problems outside of school before they entered Project 99. Six of them said that there were no major problems in their lives outside of school. One referred to some family disturbances, and another said that there were "a few" major problems but was not specific. Only one described his problems, saying that he had had a "who cares" attitude and had partied a lot. He went on to comment that the Project year had "really changed my attitude".

Most of the students viewed the Project teacher as a person with whom they could discuss problems if they had any. Only two students said that they could not. Unfortunately, one of these was one of the ones who had admitted to having major problems. He said that he had been afraid to talk to the Project teacher, but added that now he is not afraid to go to the school counsellor. The other students all said that they could talk to the teacher, two of them adding very favourable comments about her willingness and ability to listen.

The Project 99 Experience

The students were first asked in a general way to say whether the 99 year had been a good year or a bad year, and why. All of the students remembered the Project 99 year as a good year. The most common reason cited was that the work was easier and they could cope with it more effectively. Three of them referred to the fact that they were encouraged to achieve but not forced or pressured, while another said that there was a better learning atmosphere. Five of the students said that their 99 experience was fun or enjoyable or even, in one case, "exciting". Other benefits mentioned included having friends, having more privileges, experiencing changes in their own attitudes and being on television. (This last comment referred to the fact that a local television station came to the school during education week to interview students in the propgram.) As one student said, he found that he had "more confidence in the teacher and more confidence in myself."

Next, the students were given a set of ten cards, each one listing a factor which might have been important in the Project year. Students were given the opportunity to add other factors if they wished, but none did. Then they were asked to pick out the cards that identified what they saw as the most important factors, and to put them in order of importance. The results were treated in two different ways. First, a count was made of the number of times each factor appeared among the top five choices. The results were as follows:

The atmosphere in the class (the way you were treated by the teacher, by other kids, etc.)	9 times
Working on computers	7
The teacher	5
Having one main teacher	4
Being with kids my own age	4
School activities	4
Field trips	3
Being in the right grade for my age	2
The school	2

One factor was not chosen at all: "Being in a special class". One student made a point of saying that that was what he did not like about Project 99. The others made no reference to it at all, either positively or negatively.

Next, the factors chosen were given weighted scores by giving 10 points for a first choice, 8 points for a second choice, etc. If these weighted scores are used as a measure of relative importance, the factors can be ranked as follows (The weighted scores are shown in parentheses.):

The atmosphere in the class (66)
Having one main teacher (38)
The teacher (36)
Working on computers (36)
Being with kids my own age (24)
School activities (22)
Being in the right grade for my age (14)
Field trips (12)
The school (10)

In the discussion that followed, it became clear that some of the factors meant more or less the same things to some of the students, and could perhaps have been combined. Thus, for example, "Having one main teacher" and "The teacher" meant the same thing for some students, and for others "The teacher" and "The atmosphere in the class" were difficult to separate. It would be difficult to adjust the scoring to reflect this, but it does seem clear that atmosphere, the teacher, and being with students the same age were all major factors in the Project 99 year, in the view of the students.

The students were then asked to discuss their reasons for their choices of factors that were important in Project 99. Their comments about the more important ones can be summarized as follows:

> The atmosphere in the class: There were two reasons given frquently for choosing this factor. One had to do with being treated equally and fairly by the teacher. One commented, "You were treated as an equal. You weren't bossed around and teased." Another said that "the students were all equal. You didn't feel left out." Everyone was treated the same or, as one student said, "Everyone was teacher's pet."
>
> The other reason had to do with having classmates who were friendly and helpful. Only one student mentioned that it was good to be in a class with all Native students. The others made no mention

of race. They were more concerned with the social dynamics of the class, saying that they "got along better", "became close", "worked together", and "helped each other". One described his classmates as "pretty fun people" who worked together (and, he added, "didn't cheat"). Another commented, "They were all understanding."

Having one main teacher: Here the students said that it was easier to follow and remember what one teacher said, and that they liked having fewer interruptions in their schedule. They could concentrate better than when they had to change classes frequently. The other comments under this heading had to do not so much with having any one main teacher, but with having their particular teacher. Those comments are included under the next heading.

The teacher: There were a number of characteristics mentioned here. Some were a little surprising. "She taught us some manners" was mentioned by one student, for example. The reasons given most frequently for choosing this factor, however, had to do with the teacher's understanding nature, her encouraging nature and her friendliness. "She understood us, and understood our problems," said one. "You could talk to her. She was understanding," commmented another. Regarding her encouraging nature, there were comments such as: "She encouraged you to work and complete the grade" and "She built confidence in yourself." Other students said that she was friendly or, as one student said, "She was more like a friend and a teacher." Another added simply, "She was a great teacher."

Working on computers: Several of the comments here were rather general, saying simply that computers helped them to learn better. Some mentioned specific skills, such as spelling, that were enhanced by the use of the computer. Others said that computers were fun and more interesting. "It was relaxing and learning at the same time," one said, and another commented,"They were pretty fun. I learned a lot." One student said that the computer helped him to "work through steps", perhaps referring particularly to the Logo component of the program in which students were taught to plan out operations in a careful, step-by-step sequence.

> Being with kids my own age and Being in the right grade for my age: Being treated as grade nine students was important to the students in Project 99. Several of them commented on how difficult it had been for them being in grade seven, where they were taller and older than the others. Project 99 was better. "You didn't feel out of place," said one. "With younger kids you felt awkward." Another one said, "No one said 'I'm older or better than you'. They were all mature. You felt more mature." Another observed, "You fit in with all the rest of the students. You didn't feel too old or too young." One said that he "didn't feel stupid or dumb" and another commented on being more comfortable, adding "I felt a lot better about myself."

> School activities: Some comments here referred to such things as school sports and intramurals. Others were more general, referring simply to the wide variety of things to do at the school. One student liked being able to pick his own subjects.

Students were then asked to say what changes they would make in Project 99. Five said that they would make no changes, including one who said emphatically, "absolutely nothing". Two made suggestions about program content. One of them thought there should be more class time allowed for students to complete their assignments, and the other thought that there should be more time given to physical education. One student recommended that there be an age limit set for entry into the Project to keep out students who might be too young to understadnd the program. The remaining student said that it should be a two-year program but otherwise should remain the same.

This last comment anticipated the next question, which asked students what they would think about a two-year instead of a one-year program. One student did not think that a two-year program would be desirable: "The second year would probably be the same as the first year." The rest all felt that a two-year program would be better, and would better prepare students for high school. One suggested that the program should start in the grade eight year and then go on to a grade nine year. Two of the students, however, although recommending a two-year program for other students, did not favour it for themselves. This seemed to be related to their own age on entering high school. As one of them explained, "It depends on how old you were when you came into the program." That is, if you were already two or more years over-age for your grade, you should probably get on to high school rather than spend another year in Project 99.

Experience Since Leaving the Project 99 Program

All of the students interviewed had continued in school after their year in Project 99. Five of them had spent one year in school since completing the Project. The other four had been in school for two years, but one of them had stayed out for a semester after completing the first semester in high school. When they were asked about the number of credits earned in high school, four said that they were not sure. The others gave totals ranging from 10 to 60. (School records indicate totals ranging from 10 to 55.)

Attendance in the year or years following the Project 99 experience, according to the self-reports of these nine students, has ranged from "real bad" to nearly perfect. Four said that their attendance had been poor (including the one who described it as "real bad"). Two others said that it had been "pretty good" and the remaining three described it as "good". School records show that individual student's attendance ranged from 81.8 % to 99.7 %, with a mean of 93.5 %. This compares favourably with their attendance when they were in the Project.

The last question in this section of the interview schedule asked the students what they thought could have been done at the high school to help them adjust better to the high school program. They had few suggestions to make. One mentioned the need for more time for completing assignments (i.e. a study period) and perhaps some tutoring. Another suggested a program at the high school similar to Project 99. The others generally felt that nothing else needed to be done. In fact one said, "Not anything. It's up to the student to make something of himself."

Program Evaluation

The students were first asked about how they felt Project 99 had affected their attitude toward school. Three of them said that it had not affected it, but their responses were all somewhat different. One said that it didn't matter, and that he didn't really know what difference it had made. Another said that it hadn't changed his attitude, because he had liked school even before the Project year. (He was the exception to the rule.) The third one said that the Project didn't really affect his attitude toward school, but it did improve his attitude toward himself and built his self-confidence. The others all said that their attitude had become more positive. One said it had made him look at school differently, and that he realized now that school could be fun. Another said, "It gave me a better outlook. It made me realize that I need an education." Still another commented, "It helped me a lot. Now I look forward to school. I want to keep on going and get an education."

When they were asked whether or not they should have been placed in Project 99, one student said that it didn't matter to him. All of the others felt that it had been the right thing to do. One of them remarked again about the difficulty he had had in communicating with people when he was in the regular class, and commented on how much the Project had helped him to communicate more easily. Another observed that, had it not been for the Project, he would likely still be in grade 7 or 8 instead of high school. Yet another, recalling how embarrassed he had felt at being the tallest and oldest student in grade 7, said that he should have been placed in such a program sooner.

They were next asked whether or not they felt that the program could help other students. All of them, even the one who had said that being in the Project didn't really matter to him, agreed that the Project could be valuable to others. As one of them said, "If it could help me - and I was a hopeless case - it could help anyone." Four of them made a point of saying that it could be particularly helpful to kids who have problems or are into drugs and alcohol. One student said that it could help others if they could "stay in long enough", and added, "I was nearly caught up when I had to leave." He suggested that it should be a two-year program.

Computer Usage

The students were asked a series of questions about the use of computers in the Project. Seven of the nine said that they felt that computers had played a useful role in the program, although one of them qualified his response by adding that it had been "a small part". One student was unsure, and the other said "no". One student remarked that they made the work easier and, moreover, that they "never put you down when you've made a mess of it. You can straighten things out on your own." Two students commented on the value of the program-writing aspects of Logo. The student who felt that computers had not been useful added, "What can be done on computers can be done just as fast on paper." It is perhaps unfortunate that only three of the students have used computers since their Project 99 year, one in Computer Science, another in Building Construction and the third in Drafting.

They were also asked to comment separately on the various types of programs that had been used in the Project. The Logo component was viewed favourably by all but one student. That one thought that it was "alright" but that it hadn't helped him yet. Another student observed, however, that he didn't realize how important it was to him until now. The others said that it had been fun or interesting, or gave specific ways in which it had helped them. Two students said it had helped them with math (geometry, degrees and angles, and computation). Another said it had helped him in Drafting. Two others commented on its value in teaching them how to proceed step by step in solving a problem. (The Project teacher commented that she observed that the programming methods learned in Logo -- estimating degrees, proceeding step by step, writing out plans, etc. -- were transferred to language arts and mathematics, making it worthwhile.)

The games and simulations were not viewed very positively by the students. Only two of them said that they had found them interesting or useful. The others felt that the particular programs that they had access to were "too easy" or "boring" or, in one case, "frustrating and kind of annoying". In the teacher's view, these programs served a useful purpose as a reward for achievement, and allowed an opportunity for students to challenge one another in a spirit of friendly competition. Some programs (such as "Oh Deer" and "Survival Math") offered the students a chance to be in charge in a problem-solving situation, making choices and decisions as required by the game and accepting the consequences. However, the teacher observed that most of the games and simulations employed lost their appeal after a matter of a few weeks.

Tutorial and drill-and-practice programs were viewed somewhat more favourably. Five of the students thought that these programs had helped them in language arts or mathematics or both. Several commented that if you had missed things in math, you could get caught up on the computer. Another remarked that the computer could teach you at a level below the normal grade level, helping you to catch up on things you had missed in earlier grades. On the other hand, two students found these programs hard to use and frustrating. Three students expressed a preference for computer-based instruction, saying that computers were more fun or not so boring. One student added, "Teachers can drag on once in a while." Two others, however, preferred teachers over computers. "The teacher can explain it and put it in his own words," one observed. The other commented that the teacher can stop and help you at the point where you're having trouble. Finally, two students said that it would be best to have both teachers and computers.

The Project teacher observed that students often found the drill-and-practice programs frustrating, and were prepared to work with them for only short periods of time. Moreover, the use of the programs was highly individualized because of the varying needs and problems of the students. While this capability of addressing individual needs is, of course, one of the benefits of such programs, it also means that the students do not do the same things as their classmates. The Project 99 students seemed to prefer computer activities, such as learning Logo or Appleworks, in which there were daily, sequential lessons that they all followed, where each lesson built on previous learning and there was a clear sense of mastery and growth.

The Project teacher said that in her view, after Logo, the second greatest value in computers had been the use of word processing programs. She had found them to be highly motivational for students. They enjoyed using them in completing writing assignments. A listing of computer programs that were found to be useful in Project 99 is included in Appendix B.

DISCUSSION

There are two main questions that one might ask in a study such as this: Did the Project achieve a sufficient measure of success to justify the additional expense? And what were the factors that contributed to whatever success it did have?

Regarding the first of these, there was of course some additional financial cost to the Board, since half of one teacher's teaching time was assigned to only 12 or 13 students (or fewer as the year progressed and some students dropped out). While this is a more expensive use of teacher time than the average junior high school, it is no more expensive than many low-enrolment high school classes. Moreover, the Project students were accommodated in regular grade 9 classes for half of each day, so that the pupil-teacher ratio was not adversely affected during the "integrated" part of the program. In any case, one would need to weigh the apparent gains, especially for the nine students that were interviewed, against this additional cost.

There was also a potential cost for the Project students in terms of reputation and personal status, in that they were singled out and placed in a "special" class. For adolescent students, this can be a major personal cost, and one of the Project students pointed out that it was a negative feature of the program for him. However, in view of the fact that every one of the students said that being assigned to Project 99 had been a good thing for them, it does not seem that this potential personal cost was a significant factor. There seem to have been several benefits that more than outweighed it. First, the Project offered the opportunity to be educated with other students of the same or nearly the same age. Secondly it offered an opportunity to catch up: to catch up in basic skills in which the students had significant deficiencies, and to catch up in terms of grade placement by being able to go on to high school the following year. Thirdly, it offered the students an experience which allowed and encouraged them to reevaluate their attitudes toward themselves and toward school.

Regarding the factors that contributed to the success of Project 99, there appear to have been several. The use of microcomputers was one, at least for some of the students. However, it is clear from the students' comments that one should not expect too much of computers. Any thought that the computer might take the place of the teacher does not seem justified. A few of the students found the computers to be helpful for drill and practice in overcoming skill deficiencies. More of them, however, found the computer's greatest value to be in helping them to acquire useful learning strategies, through learning how to use Logo in a planned cognitive strategies program.

Of more importance than computers were four other factors: the teacher, the learning atmosphere in the classroom, being in a class with others the same age, and being taught material that permits the students to experience success. It may be possible to provide some of these features in regular classes. It may be easier, however, and perhaps in some cases necessary, to provide a special class such as Project 99. Certainly the importance of these factors raises some challenging questions about some common school practices, such as grade repetition regardless of chronological age, and teaching students the regular work of their nominal grade even though they clearly have deficiencies that make success virtually impossible. We should be challenged, as well, to examine closely our views about what it is that motivates adolescents, and to remind ourselves of the importance of motivation for success.

REFERENCES

Carnew, F. I. and Clark, W. B. Cognitive Education and Native Adolescents: A Pilot Study. Calgary, Alberta: Institute for Computer Assisted Learning, University of Calgary, 1985.

APPENDIX A

PROJECT 99 EVALUATION

Name: ____

Year enrolled in the 99 class __________ Age then __________

The purpose of this interview is to get your opinions about the Project "99" program that you were enrolled in at Ponoka Junior High School for a year. In that program, you stayed with one teacher for about half of each day, and you made extensive use of computers. We are interested in getting your opinions about both aspects of the program. We think that you may have some ideas that will be helpful in planning similar programs for junior and senior high school students.

A. Previous School History:

1. How many schools did you attend before enrolling in the Project 99 program at PJH? Which schools were they?
2. Which school were you in just before you enrolled in the Project 99 program? What grade were you in?
3. What had your attendance been like? Why?
4. What had your marks generally been like?
5. Did you repeat a grade? If so, which grade (or grades)?
6. What did you think or feel about school prior to enrolling in the Project 99 class?
7. Did the Project 99 class change your opinion about school? If so, how?
8. Had you ever dropped out of school before that? Explain.
9. How did your family feel about school? (Did they encourage you? discourage you? force you to go?)
10. Did you have any problems outside of school in those days?

11. Did you feel that you could discuss your problems with your teacher in the Project 99 class?

B. The Project 99 Year

1. Was that a good year or a bad year for you? Explain. How did it compare to the year before?

2. Read these cards, and pick out the ones that you think made an important contribution to your 99 year:

the teacher

having one main teacher

working on computers

being in the right grade for my age

the atmosphere in the class (the way you were treated by the teacher, by other kids, etc.)

school activities

the school

being with kids my own age

field trips

being in a"special" class

3. Were there other things that were even more important to you? (If so, enter each on a blank card.)

4. Now take the cards that you picked as being important and arrange them in order, putting the most important one at the top. (Then discuss why you chose the ones you did.)

5. What would you change about the program?

6. What would you think of a two-year program instead of a one-year program?

C. Since Leaving the Project 99 Program

1. Have you continued in school since leaving the Project 99 program?

2. What has been your school experience since leaving the 99 program?

(a) years enrolled: ______________________________

(b) credits earned: ______________________________

(c) attendance: ______________________________

(d) attitude toward school: ____________________

3. Are you attending school now? _________

4. Have you dropped out of school in any of the semesters since you were in the 99 Program? (Note details.)

5. Have you been employed since being in the 99 Program? How have you been employed? (Note details.)

6. What do you think could have been done at the high school to help you adjust better to the high school program?

D. Program Evaluation

1. How do you think the 99 Program affected your attitude toward school?

2. Toward work?

3. Do you think you should have been in the 99 Program? Why or why not?

4. Do you think the 99 Program could help other kids?

5. What recommendations would you make to improve the program?

6. Computers were used in several ways in the program. You learned to use Logo, you used some games and simulations (e.g. Missing Links, Memory Castle, The Pond), and you used some tutorial and drill-and-practice programs (e.g. Milliken Math).

(a) How did you feel about about learning Logo? How did it help you, or did it? What did you like about it? Dislike?

(b) How did you feel about the games and simulations? What was good about them? Bad?

(c) What did you think about tutorial and drill-and-practice programs in math and language? What was good about them? Bad? Would you prefer them, or regular teaching?

7. Overall, do you think that computers were a useful part of the 99 program? Why?

8. Have you used computers since? Do you use one now?

9. How do you feel about computers in school?

APPENDIX B

Microcomputer Programs Found to be Useful in Project 99

Subject Area	Title	Publisher/Source
Language Arts	*Appleworks	Apple
	Bank Street Writer	Broderbund
	Language Arts 1 & 2	MECC
	*Masterspell	MECC
	*Missing Links	Sunburst
	Spelling 1 & 2	MECC
	Word Herd: Look Alikes	Sunburst
	Word Herd: Sound Alikes	Sunburst
Mathematics	Milliken Math	Milliken
	*Survival Math	Sunburst
General	The Factory	Sunburst
	Incredible Laboratory	Sunburst
	Memory Castles	Sunburst
	*Oh Deer	MECC
	*The Pond	Sunburst
	*Puzzles and Posters	MECC
	*Logo	Apple

* Signifies programs that were especially useful.

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